Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the present application:

Listing of Claims:

Claim 1-14 (cancelled)

Claim15 (original)   A method for generating a visually significant barcode comprising:

receiving an $M \times N$ pixel image;

receiving a message having a plurality of fields;

partitioning the $M \times N$ pixel image into a plurality of $K \times K$ image matrices; and

converting the $K \times K$ image matrices to $K \times K$ barcode matrices by utilizing one of a predetermined set of L distinct maps; wherein the selection of the particular map is based on a corresponding field of the message.

Claim16 (original)   The method as in claim 15 wherein the pixel image is one of a black and white image, a color image, and a gray-level image.

Claim17 (original)   The method as in claim 15 wherein the barcode matrices are multi-level barcode matrices that includes one of gray level barcode matrices and color barcode matrices.

Claim18 (original)   The method as in claim 15 further comprising:

defining an image area for predetermined fiducial marks.

Claim19 (original)   The method as in claim 15 wherein the predetermined set of L distinct maps includes a predetermined set of halftoning algorithms that can be one of cluster dithering, disperse dithering, and error diffusion.

Claim20 (original)   A method for decoding a visually significant barcode comprising:

       receiving the barcode image;

       partitioning the barcode image into a plurality of sub-images;

       comparing each sub-image with a set of L possible barcode matrices; and

       decoding a message based on a match estimation of each sub-image to each one of the L possible barcode matrices in a sequence of P symbols over $\{1, 2, ...L\}$.

Claim 21 (original)   The method as in claim 20 further comprising:

       receiving an image having a barcode image; and

       locating the barcode image in the received image.

Claim 22 (original)   The method as in claim 20 further comprising:

       detecting at least one fiducial mark in the barcode image; andusing the fiducial mark to correct distortions in the barcode image.

4